

NOTES FROM THE WEATHER BUREAU LIBRARY.

By C. FITZHUGH TALMAN, Librarian.

THE DEATH OF PROFESSOR MASCART.

These notes (March, 1908, p. 71) recently contained a brief notice of the affecting scene at Poissy, on September 12, 1907, when Professor Mascart took leave of his colleagues of the International Meteorological Committee, over which he had presided for fourteen years. His health had been declining for some time, and he was not strong enough to make the short journey to Paris, where the regular sessions of the committee were held. Now comes the sad news of the death of this distinguished meteorologist and physicist on August 26, 1908, at the age of 71.

Nature (London) of September 10 contains a comprehensive account of Professor Mascart's scientific career, while a somewhat more intimate sketch of his life and character appears in *La Nature* (Paris) of September 12.

Éleuthère Élie Nicolas Mascart was born at Quarouble, near Valenciennes, February 20, 1837. He was graduated from the *École Normale Supérieure*, taught physics for several years, and in 1878, when the meteorological service of France was separated from the astronomical observatory, he became the first director of the independent service—the Bureau Central *Météorologique*. He retired from the directorship January 1, 1907, and was succeeded by Professor Angot.

The branches of physics, besides meteorology, in which Professor Mascart was especially interested were electricity and optics, and his most notable contributions to meteorology related to atmospheric electricity and atmospheric optics. His "*Traité d'optique*" has, in fact, been the principal reference book on meteorological optics down to the very recent appearance of the (still incomplete) "*Meteorologische Optik*" of Pernter.

TRAVELS OF AN AUSTRALIAN METEOROLOGIST.

Mr. H. A. Hunt, Commonwealth Meteorologist of Australia, who has been despatched by his government upon a tour of investigation of the principal meteorological services of the world, recently arrived in America by way of the Pacific, visited some of the western coast stations of the U. S. Weather Bureau and of the Meteorological Service of Canada, the headquarters of the latter service at Toronto, and the Central Office of the Weather Bureau at Washington, where he spent ten days early in September. He also visited the Research Observatory of the Weather Bureau at Mount Weather, Va. Mr. Hunt sailed from New York September 17 for Hamburg, to visit the *Deutsche Seewarte* and take part in the celebration of the twenty-fifth anniversary of the German Meteorological Society.

The Commonwealth Meteorological Bureau of Australia has but recently been formed, thru the amalgamation of the several state services of that country (see *MONTHLY WEATHER REVIEW*, May, 1907, p. 28). The founding of this national service was somewhat analogous to, and nearly contemporary with, the organization of the new Public Weather Service of Germany. It is interesting to note that in both cases the governments concerned sent representatives abroad to glean ideas and suggestions from the experiences of the meteorological bureaux of foreign countries. Germany sent Doctor Polis, of Aachen, to America for this purpose in the autumn of 1907.

BULLETINS OF THE AUSTRALIAN METEOROLOGICAL SERVICE.

Almost coincidentally with Mr. Hunt's arrival in America the post brought us his "Climate and meteorology of Australia," which was issued in March, 1908, as Bulletin No. 1 of the new Commonwealth Bureau. It is reprinted from the 1901-1907 "Yearbook of the Commonwealth of Australia," with the correction, however, of the numerous typographical errors that slipped thru the press in the earlier publication. This is a compact little account of Australian climate and weather, based on observations down to and including 1906, special attention being given to the meteorology of the state capitals.

Bulletin No. 2 of the same bureau, issued July, 1908, is entitled "Rainfall map of the Commonwealth of Australia," and is also by Mr. Hunt. Besides eleven pages of text it comprises a large chart of the mean annual rainfall of Australia and Tasmania, based on the records of nearly 700 stations for the decade 1897-1906. One object of this publication is stated to be "to dispel many of the erroneous impressions that are current respecting the rainfall of Australia and Tasmania." The author says:

When compared with other continents the quantities and distribution of rainfalls over Australia are not so unfavorable as is generally supposed. * * * Comparing the rainfalls of the chief cities of the rest of the world with those of Australia, we find that Bombay, Calcutta, Colombo, Singapore, and Hongkong are the only places out of a list of 42 that exceed the totals of Sydney and Brisbane. Perth has a greater annual rainfall than New York, and more than that of 28 other cities of the 42. Hobart nearly equals London, which Melbourne exceeds by an inch. Eleven of the 42 cities mentioned have less rain than Hobart.

METEOROLOGY AT THE BRITISH ASSOCIATION.

At the Dublin meeting of the British Association, which opened September 2, 1908, the Mathematical and Physical Section was presided over by Dr. W. N. Shaw, Director of the British Meteorological Office. Doctor Shaw's presidential address, which is published in *Nature* of September 3, 1908, is of interest to all meteorologists. In reviewing the work of the Meteorological Office the director calls attention to the fact that arrears in the publication of data are being rapidly made up, so that by the end of this year "six weeks will be the full measure of the interval between observation and publication in all departments." He also makes the interesting announcement that on July 1, 1908, the morning hour of observation at 27 out of the 29 telegraphic stations in the British Isles was changed from 8 a. m. to 7 a. m., so that there is now a strictly synchronous system of observations for western and central Europe. Dealing with the question of the economical administration of his office, and the perennial demand for tangible "results," Doctor Shaw borrows his metaphors from "The Merchant of Venice" and shows how the demands of the scientific Shylocks are frequently met with the news that some unpromising argosy of investigation that started on its voyage long ago "hath richly come to harbor suddenly." Several recent discoveries of British meteorologists are cited in illustration, one of the most interesting being that of the semidiurnal variation in the velocity of the southeast trade wind, corresponding to the semidiurnal variation of barometric pressure. This discovery is the result of a recent elaboration of anemometric observations at St. Helena dating from 1891.

At the same meeting was held an important discussion on the isothermal layer of the atmosphere, an abstract of which will be published in a later number of the *REVIEW*.

THE WEATHER OF THE MONTH.

By Mr. P. C. DAY, Acting Chief, Climatological Division.

PRESSURE AND WINDS.

The distribution of mean atmospheric pressure for August, 1908, over the United States and Canada, is graphically shown on Chart VI, and the average values and departures from the normal are shown for each station in Tables I and III.

Nearly normal pressure prevailed during the month over the entire area of the United States and Canada. Over the districts from the Mississippi Valley eastward to the Atlantic the average pressure was slightly above 30.00 inches, while on the Pacific slope it ranged from about 29.90 over the southern

coast of California to slightly more than 30.05 on the coasts of Oregon and Washington.

The average pressure was generally less than that of the preceding month over nearly all districts in the United States and Canada, the exceptions were the Great Valley of California, portions of the Canadian Northwest Territories, and the extreme eastern portion of the Maritime Provinces, where the pressure was slightly greater than that for July.

Pressure was above the normal by small amounts over practically all portions of the United States and also over Canada as far as observations extend.

The greatest positive departures from the normal pressures, +.04 to +.06 inch, occurred over the Central Rocky Mountain and Plateau districts, over extreme eastern Canada, and over western Oregon, Washington, and British Columbia. There was a small area including eastern Georgia and western South Carolina where the pressure was about normal or slightly below.

Southerly winds prevailed over the lower Mississippi Valley, most of the Plains region, and along the Atlantic coast, and northerly or northwesterly winds prevailed over the Pacific slope and generally along the northern border.

There was a general excess of wind movement along the Atlantic coast, over the Lake region, upper Mississippi Valley, and on the Pacific slope, while in the Ohio Valley, west Gulf States, and generally over the Rocky Mountain districts storm activity was somewhat less than the average.

TEMPERATURE.

The mean temperature of the month as a whole was below the normal from the Mississippi Valley westward to the Pacific, except over Oregon, portions of southern and eastern Washington, and northern California. It was also below normal over the lower Lake region, upper Ohio Valley, and from the southern Appalachian Mountains northeastward to New England.

Over the Gulf States and a narrow strip from the lower Ohio Valley northward to the upper Lakes, the average temperature was above the normal. The departures from normal temperatures were within moderate limits.

High maximum temperatures prevailed over the interior valleys of California and Oregon at intervals during the month, and they were unusually high over portions of the more northern districts between the Lake region and the Rocky Mountains during the first week of the month.

Minimum temperatures were near the freezing point over the Interior of New England, the northern part of North Dakota, and at points in the northern Rocky Mountain districts, but elsewhere they were moderate, remaining generally above 50° in all the great agricultural districts.

PRECIPITATION.

The distribution of precipitation during August, 1908, is graphically shown on Chart IV by appropriate shading or by figures representing the actual amount of fall over districts, the topography of which is too varied to admit of approximately correct shading.

Heavy rains occurred over the Atlantic coast districts from Chesapeake Bay southward, where, except in portions of southern Georgia, amounts from 8 to 15 inches were generally recorded. Some heavy falls, ranging from 6 to 8 inches, also occurred over portions of southern New England, southeastern New York, northern New Jersey, and over a narrow region from central Iowa southward to eastern Texas and southern Louisiana.

The usual summer rains occurred over the greater part of Arizona and New Mexico, and they extended northward into Colorado and Utah. Some unusually heavy rains occurred in the mountain regions of southern California, and there was a

small area in extreme northwestern Minnesota with precipitation from 3 to 7 inches.

Over portions of the Ohio Valley and lower Lake region the monthly amounts were less than 2 inches, and in the southern portions of Indiana and Illinois less than 1 inch fell. No rain occurred over the greater part of central and northern California, and the amounts over the remaining States of the Pacific coast and over most of the Plateau districts were less than 1 inch, except in extreme western Washington.

Precipitation was above the normal along the entire Atlantic coast from the central portions of South Carolina and Georgia to the Maritime Provinces of Canada, and also over southern Florida. Over portions of northern and eastern Georgia, northern South Carolina, and eastern and central North Carolina the amounts were from 6 to more than 10 inches above the normal fall. Amounts 2 to 4 inches above the normal occurred over portions of lower Michigan and the adjacent parts of Ohio, Indiana, and Illinois, and there were small excesses locally in northwestern Minnesota, in portions of the lower Missouri Valley, Kansas, and Texas, generally over the Rocky Mountain region, and in portions of southern California.

Over northern Arizona and the southern portions of Utah and Colorado the month was unusually rainy, with frequent thunderstorms. The rivers and small streams carried large volumes of water, and the supply of water for irrigation purposes was abundant.

The heavy rains from the 20th to 27th, and especially those of the 24th and 26th, caused floods of unusual proportions in the rivers and streams of portions of northern and eastern Georgia, northern South Carolina, and central and eastern North Carolina. Many of the streams reached heights previously unknown, and much loss of life and damage to property resulted. A more detailed history of these floods appears in another part of the Review.

After the 17th there was a general absence of precipitation over portions of the Ohio Valley and Lake region, and by the end of the month the need of more rain was being felt in those districts.

HUMIDITY AND SUNSHINE.

Altho rainfall was unusually heavy and rainy days comparatively frequent during the month along the Atlantic coast, the relative humidity was generally less than the average and it was also below average over practically all other districts east of the Mississippi River. From the Mississippi River westward to the Pacific there was a uniform excess of humidity, except at a few points in central California. Over most of the Mountain and Plateau districts the excess ranged from 10 to 15 per cent.

There was an abundance of sunshine over the districts from the Appalachian Mountains westward over the Ohio, Mississippi, and Missouri valleys, over the Gulf States and generally over the Pacific slope. There was much cloudy, rainy weather along the middle Atlantic coast, over southern New England and portions of Arizona and the central and southern parts of the Rocky Mountain region.

WEATHER IN ALASKA.

From the few reports received it appears that seasonable weather prevailed over that Territory. In the southern coast district temperatures were moderate and clear and rainy weather succeeded each other at frequent intervals, with rainfall from 3 to 5 inches. In the vicinity of Cook Inlet and at the mouth of the Copper River the minimum temperatures reached the freezing point toward the end of the month, and cloudy, rainy weather was the rule. Over the eastern interior districts embracing the upper Yukon Valley, temperatures near the freezing point occurred on several dates, there were but few days with rain and much calm, clear weather prevailed.

Average temperatures and departures from the normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Accumulated departures since January 1.	Average departures since January 1.
		°	°	°	°
New England	12	66.5	- 0.9	+ 4.1	+ 0.5
Middle Atlantic	16	71.7	- 1.1	+ 1.1	+ 0.1
South Atlantic	10	77.9	+ 0.1	+ 8.3	+ 1.0
Florida Peninsula *	8	80.8	- 0.8	+ 7.2	+ 0.9
East Gulf	11	80.0	+ 0.8	+ 9.4	+ 1.2
West Gulf	10	81.2	+ 0.4	+13.1	+ 1.6
Ohio Valley and Tennessee	13	75.3	+ 0.5	+ 8.8	+ 1.1
Lower Lake	10	68.4	- 1.1	+ 1.8	+ 0.2
Upper Lake	12	66.4	+ 0.3	+10.3	+ 1.3
North Dakota *	9	63.4	- 3.2	+16.9	+ 2.1
Upper Mississippi Valley	15	72.2	- 0.6	+ 9.7	+ 1.2
Missouri Valley	12	72.7	- 1.1	+15.7	+ 2.0
Northern Slope	9	64.3	- 2.4	+ 6.7	+ 0.8
Middle Slope	6	74.5	- 0.8	+13.5	+ 1.7
Southern Slope *	7	78.7	- 0.8	+ 8.0	+ 1.0
Southern Plateau *	12	76.8	- 0.7	- 1.7	- 0.2
Middle Plateau *	10	68.3	- 1.3	- 3.4	- 0.4
Northern Plateau *	12	67.4	- 0.7	+ 4.6	+ 0.6
North Pacific	7	59.9	- 1.2	- 0.9	- 0.1
Middle Pacific	8	65.8	- 1.0	- 0.6	- 0.1
South Pacific	4	70.9	+ 0.4	+ 3.6	+ 0.4

* Regular Weather Bureau and selected cooperative stations.

Average precipitation and departures from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
		Inches.		Inches.	Inches.
New England	12	4.55	115	+0.60	-2.00
Middle Atlantic	16	5.23	118	+0.80	-0.10
South Atlantic	10	9.02	147	+2.90	+1.50
Florida Peninsula *	8	7.43	103	+0.20	-4.50
East Gulf	11	3.71	79	-1.00	-0.50
West Gulf	10	3.40	113	+0.40	+1.60
Ohio Valley and Tennessee	13	3.05	88	-0.40	-1.20
Lower Lake	10	2.55	87	-0.40	+0.70
Upper Lake	12	2.89	97	-0.10	+0.30
North Dakota *	9	2.24	105	+0.10	+0.70
Upper Mississippi Valley	15	2.91	91	-0.30	+2.00
Missouri Valley	12	3.56	106	+0.20	+3.10
Northern Slope	9	1.45	117	+0.20	+2.50
Middle Slope	6	3.85	156	+1.40	+4.70
Southern Slope *	7	2.05	84	-0.40	+4.70
Southern Plateau *	12	1.79	120	+0.30	+0.80
Middle Plateau *	10	1.87	204	+0.70	+0.40
Northern Plateau *	12	0.54	100	0.00	-1.10
North Pacific	7	1.11	137	+0.30	-2.60
Middle Pacific	8	0.02	100	0.00	-3.90
South Pacific	4	0.18	257	+0.18	-1.12

* Regular Weather Bureau and selected cooperative stations.

In Canada.—Director R. F. Stupart says :

The temperature was from 1° to 2° above the average in the Lake Superior district and over a portion of the Georgian Bay region, but in all the large remaining portion of the Dominion the average was nowhere exceeded. The negative departures were small, however, and nowhere exceeded 3°; the greatest departures recorded were in northern British Columbia, northeastern Saskatchewan, in Manitoba, the Ottawa Valley, and the Bay of Fundy district.

In British Columbia the rainfall was slightly in excess of the average

in Cariboo, but very deficient elsewhere. In Alberta it was everywhere less than the normal, as much as 50 per cent in some localities. In western Saskatchewan the rainfall was also sparse, but over the remainder of the Province and also in Manitoba rather more than the usual quantity was recorded. In Ontario it was more than the average over the larger portion of the Province, the exceptions to the prevailing conditions occurring in the Ottawa Valley and the eastern part, where little rain fell. In western Quebec the rainfall was also deficient, but in the middle and eastern portions of the Province the average quantity was well exceeded.

In the Maritime Provinces, except in a few isolated localities, the rainfall was greater than the average; this was especially the case in certain localities, noticeably in the vicinity of Halifax, where for the month it totalled nearly 11 inches, which is almost 6½ inches above the normal quantity.

Average relative humidity and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	80	- 12	Missouri Valley	69	+ 2
Middle Atlantic	76	0	Northern Slope	60	+ 3
South Atlantic	83	+ 1	Middle Slope	66	+ 7
Florida Peninsula	82	+ 2	Southern Slope	69	+ 8
East Gulf	79	- 1	Southern Plateau	55	+13
West Gulf	78	+ 3	Middle Plateau	46	+15
Ohio Valley and Tennessee	71	- 1	Northern Plateau	44	+ 5
Lower Lake	69	- 2	North Pacific	75	+ 1
Upper Lake	73	- 2	Middle Pacific	60	- 1
North Dakota	64	-12	South Pacific	66	0
Upper Mississippi Valley	70	0			

Average cloudiness and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	5.2	+ 0.2	Missouri Valley	4.3	+ 0.1
Middle Atlantic	5.4	+ 0.4	Northern Slope	3.9	+ 0.2
South Atlantic	5.4	+ 0.2	Middle Slope	4.6	+ 0.8
Florida Peninsula	5.8	+ 0.6	Southern Slope	4.0	- 0.8
East Gulf	5.3	+ 0.4	Southern Plateau	3.6	+ 0.2
West Gulf	4.1	- 0.3	Middle Plateau	3.4	+ 1.2
Ohio Valley and Tennessee	4.6	+ 0.1	Northern Plateau	3.2	+ 0.2
Lower Lake	4.0	- 0.5	North Pacific	5.2	+ 1.3
Upper Lake	4.4	- 0.4	Middle Pacific	3.7	+ 0.9
North Dakota	3.7	- 0.2	South Pacific	2.1	- 0.4
Upper Mississippi Valley	4.2	+ 0.1			

Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Bismarck, N. Dak.	10	68	nw.	Point Reyes Light, Cal.	24	56	nw.
Block Island, R. I.	26	50	ne.	Do	27	53	nw.
Buffalo, N. Y.	4	60	sw.	Do	28	76	nw.
Do	12	50	w.	Do	29	70	nw.
Jacksonville, Fla.	20	53	s.	Southeast Farallon, Cal.	29	50	n.
La Salle, Ill.	15	54	nw.	Toledo, Ohio	12	51	sw.
Mount Tamalpais, Cal.	9	64	sw.	Topeka, Kans.	26	51	nw.
Do	27	66	nw.	Valentine, Nebr.	5	52	s.
Do	29	52	nw.	Williston, N. Dak.	25	67	w.
Nantucket, Mass.	27	55	ne.				